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**CLASSIC MAYA SETTLEMENT CLUSTERS
AS URBAN NEIGHBORHOODS:
A COMPARATIVE PERSPECTIVE
ON LOW-DENSITY URBANISM**

Michael E. SMITH *

Some archaeologists have suggested recently that clusters of houses at Classic Maya sites functioned as urban neighborhoods. This article presents comparative historical and ethnographic data from low-density cities to support this interpretation. I review two Mesoamerican cases: the Aztec *calpolli* and the modern Tzotzil house cluster; and urban clusters in two African cases: the Nupe city of Bida in West Africa and Addis Ababa in Ethiopia. The kinds of social relationships, activities, and conditions that characterize neighborhoods in high-density cities are also found in the comparative examples of house clusters. This comparative information strengthens the argument that clusters of houses served as neighborhoods in Classic Maya cities. [Key words: low-density cities, neighborhoods, comparative analysis, Classic Maya.]

Groupes de maisons mayas classiques et quartiers urbains: étude comparative de l'urbanisme de faible densité. Certains archéologues ont récemment suggéré que les groupements de maisons observés dans les sites mayas classiques auraient pu fonctionner comme des quartiers urbains. À l'appui de cette interprétation, cet article propose plusieurs comparaisons avec des données historiques et ethnographiques relatives à des cités à faible densité de population. Deux cas mésoaméricains sont d'abord examinés: le *calpolli* aztèque et le « groupe de maisons » tzotzil; puis deux cas africains: Bida, cité nupe d'Afrique de l'Ouest et Addis Abeba en Éthiopie. Ces exemples montrent que, dans tous ces cas, il existait des types de relations, activités et situations sociales similaires à celles observées dans les quartiers de cités densément peuplées. Ces informations renforcent donc l'argument selon lequel les groupes de maisons ont constitué des quartiers dans les cités mayas classiques. [Mots-clés: cités à faible densité de population, quartiers, analyse comparative, Mayas classiques.]

Agrupamientos de casas en las ciudades clásicas mayas y vecindarios urbanos: una perspectiva comparativa en el urbanismo de baja densidad. Recientemente unos

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arqueólogos han sugerido que los agrupamientos espaciales de casas en los sitios clásicos mayas funcionaron como vecindarios. En este artículo se presentan datos comparativos, sacados de la historia y la etnografía, sobre algunas ciudades de baja densidad para dar apoyo a esta interpretación. Se presentan primero dos ejemplos mesoamericanos: el *calpolli* azteca, y los grupos de casas entre los tzotziles de Chiapas. Luego vienen dos ejemplos de asentamiento agrupado en la África: la ciudad nupe de Bida, y la ciudad de Addis Ababa en Etiopía. Los tipos de relaciones, actividades, y condiciones sociales que caracterizan los vecindarios en las ciudades de alta densidad, también existen en los ejemplos que se presentan de agrupamientos de casas. Esta encuesta comparativa apoya pues la idea según la cual los agrupamientos de casas en las ciudades mayas funcionaban al igual que los vecindarios urbanos. [Palabras claves: ciudades de baja densidad, vecindarios, estudios comparativos, cultura maya clásica.]

Although most Mayanists now accept the notion that the large settlements of the Classic lowland Maya were cities, scholars have been slow to analyze the residential areas of these sites using the concepts and methods of urban studies. Instead of employing urban concepts such as residential segregation, spatial zoning, or neighborhood structure, archaeologists have focused on concepts like lineage, house society, and heterarchy. The non-urban focus of Mayanist social analysis may have contributed to the lingering view that the large Maya sites were not quite urban in character.

In order to advance understanding of the social dynamics of ancient Maya cities, scholars need to apply the kinds of concepts that inform urban research on modern and other historical urban societies. As a step in that direction, I describe several comparative case studies to support the claim that Classic Maya settlement clusters functioned as urban neighborhoods. A number of authors have suggested this interpretation, but without presenting any analysis or discussion (Hammond 1991, p. 266; Marcus 2004; Robin 2003, pp. 330-331; Smith 2010, p. 148). More recently, several studies of Maya urban centers have combined spatial analysis with the results of excavation data to interpret settlement clusters as neighborhoods (Arnauld *et al.* 2004; Arnauld *et al.* s. d.; Lemonnier 2011, s. d.). The present paper is intended to advance this line of research by providing a broader comparative framework.

Most analyses of past social processes and conditions by archaeologists depend on the use of analogical reasoning, and the interpretation of settlement clusters as neighborhoods is no exception. As pointed out by Wylie (1985), one way of strengthening arguments by analogy is to improve the quality, quantity, and detail of the comparative, or « source-side », data. This paper contributes to such a task by showing that settlement clusters in a number of historically and ethnographically documented low-density cities in fact served as neighborhoods. Low-density cities have received far less comparative analysis than have their high-density counterparts, and most theoretical treatments of neighborhoods

and urban society have ignored low-density cities¹. A more detailed exploration of neighborhoods and other social institutions at Classic Maya cities will not only improve our understanding of ancient Maya society, but will also contribute important data to the comparative analysis of low-density urbanism in the past.

PREINDUSTRIAL URBAN NEIGHBORHOODS

In another work, I define neighborhood as follows: « A neighborhood is a residential zone that has considerable face-to-face interaction and is distinctive on the basis of physical and/or social characteristics » (Smith 2010, p. 139). In most or all premodern cities, neighborhoods are relatively small spatial zones whose creation and maintenance result from social interaction, mutual support, and other bottom-up or generative social processes. They often co-exist with larger residential zones created by municipal or state authorities for administrative purposes. I call these latter units districts. In this paper I focus primarily on social neighborhoods.

In densely populated cities, neighborhoods are typically small in areal extent. They may correspond to a single street segment, an area around the intersection of two streets, or perhaps a secluded cul-de-sac (a common pattern in precolonial Islamic cities). Neighborhood residents typically know one another by sight and they interact in a variety of ways, often focused on local facilities (Suttles 1972, pp. 55-56). In many (but by no means all) premodern cities, one or more social parameters tend to be specialized at the neighborhood level. The most common of these parameters are ethnicity or race, place of origin, occupation, and social class (Saunier 1994; York *et al.* 2011). This is another way of saying that neighborhood residents often share one or more social attributes, and these attributes often distinguish the residents of one urban neighborhood from those of another.

In many premodern (and modern) cities, neighborhoods are created by rural-to-urban chain migration (Greenshields 1980; York *et al.* 2011). They can also be created when commoners build their houses in the immediate vicinity of the residence of a noble or other important individual (see discussion of Addis Ababa below). In newly-settled urban areas such as shantytowns, neighborhoods are often formed through bottom-up processes of social interaction among neighbors. In the recently formed squatter settlement of George in Lusaka, for example, Schlyter and Schlyter (1979, pp. 50-53) report that neighbors helped one another in numerous ways and they socialized within small areas that can be considered neighborhoods. Alternatively, neighborhoods can be created through external, top-down processes, as in contemporary planned housing developments or ancient cities with planned, walled residential zones such as T'ang-period Chang'an (Heng 1999, pp. 22-29).

Sometimes civic officials are present in neighborhoods for record-keeping, taxation, organization of labor, or other oversight activities. These may be local residents serving as officials, or they may be state or municipal functionaries imposed from above. Neighborhood members often participate in collective work projects involving maintenance of common facilities, and they typically take part in common ceremonies or festivities at the neighborhood or city level.

As a result of these various forms of collective activity, day-to-day interaction, and shared social characteristics, neighborhood residents may develop a sense of common identity, and these identities may be expressed in informal or formal labels for neighborhoods (Smail 2000). The neighborhood attributes discussed above have been documented most fully for high-density premodern Old World cities and for contemporary western cities. In the remainder of this paper I argue that these same social processes and conditions characterized settlement clusters in premodern low-density cities, a category that includes the cities of Classic Maya society.

LOWLAND MAYA SETTLEMENT CLUSTERS

Most scholars today agree that the large Maya settlements of the Classic period can be called cities (Arnauld and Michelet 2004; Chase *et al.* 1990; Ciudad Ruiz *et al.* 2001). For several decades this classification was resisted by many archaeologists, in large part because the population size and population density of the Maya sites were much lower than other Mesoamerican cities such as Tenochtitlan or Teotihuacan (Sanders and Webster 1988; Willey 1956b). Fletcher (2009; 2011) recently proposed « low density urbanism » as a phenomena that existed in a number of lowland tropical areas before the modern era, including Southeast Asia, India, Africa, and the Maya lowlands (see note 1). One of the features of many low-density cities is the occurrence of spatial clustering in the distribution of houses, with large open areas between clusters.

Gordon Willey, a pioneer in the introduction of settlement pattern research in the New World, was the first scholar to explicitly discuss and analyze settlement clusters in and around lowland Classic Maya sites. Willey (1956a) presented a three-part typology of the spatial configuration of Maya settlement around monumental centers (Figure 1). His Type C, which he noted corresponded most closely to settlement in the Belize Valley, consists of multiple clusters of houses and patio groups. Some of the clusters focus on civic architecture and others lack such features ².

In 1960, Bullard (1960) synthesized the growing body of data on Maya settlement patterns with two typologies. His classification of « archaeological remains » included house ruins, minor ceremonial centers, major ceremonial centers, and special-purpose features, and his classification of « ruin groupings

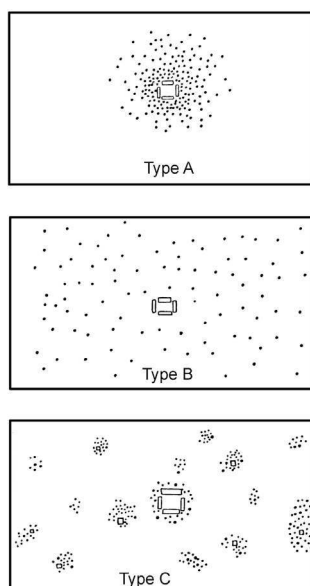


FIG. 1 – Willey's classification of Maya settlement patterns (modified after Willey 1956a, p. 111).

and settlement organization » consisted of clusters, zones and districts³. To Bullard (*ibid.*, p. 367),

The clusters may be thought of as small hamlets, varying in their degree of isolation from one another, and sometimes including an apparently specialized building which may have been used in common by the residents of the cluster. The size of the grouping suggests occupation by a kinship group.

The next major synthesis of Maya settlement patterns was the volume *Lowland Maya settlement patterns* (Ashmore 1981a). In her conceptual introduction to the book, Ashmore (1981b) stated that the cluster « is an extended household or aggregate of households and sometimes other units, and may occur as part of a larger settlement or in isolation ». She presented a four-type classification of Maya settlement clusters: informal cluster; homogeneous patio cluster; structure-focused patio cluster; and group-focused patio cluster. The latter type has several variants, shown here in Figure 2.

Unfortunately, Mayanists made little progress in the social analysis of settlement clusters after 1981. Although Ashmore's typology provides a solid basis for spatial and social research, few researchers adopted it (although see Ashmore 2007, pp. 54-55). Many scholars use terms like « house cluster » or « residential cluster » without formally defining the term (Fox and Cook 1996; Killion *et al.* 1989). One strand of research has tried to validate Bullard's model

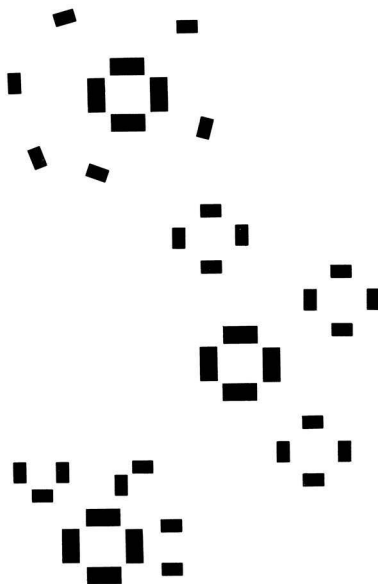


FIG. 2 – Ashmore's depiction of variants of the « group-focused patio cluster » (Ashmore 1981b, p. 53).

of the cluster as a kinship group through analogy with modern Maya settlements (Freter 2004; Willey 1981), an interpretation that can be criticized as lacking a strong ethnographic basis (Watanabe 2004). Other scholars have used data on settlement clusters to make speculative arguments about topics such as domination and resistance (Pyburn *et al.* 1998).

A group of French archaeologists has revived the study of Maya settlement clusters through the application of spatial analysis and excavation. At the site of La Joyanca, Arnould *et al.* (2004, p. 77) produced a map of clusters and interpreted them as neighborhoods⁴. More recently, Éva Lemonnier (2011; s. d.) has carried out a more detailed study of the clusters at La Joyanca; this is the most sophisticated analysis of Maya neighborhoods to appear. In a current edited book on Mesoamerican neighborhoods, Annereau-Fulbert (s. d.) and Arnould *et al.* (s. d.) contribute similar analyses of neighborhoods at highland Maya sites and Río Bec sites. The case studies presented here are intended to support and extend this line of research.

CASE STUDIES: MESOAMERICA

Two contexts within Mesoamerica provide illuminating comparisons for Classic Maya house clusters. The Aztec *calpolli* is a well-described pre-Spanish

social unit whose spatial expressions are quite similar to Classic Maya clusters and minor ceremonial centers. The waterhole group among the contemporary Tzotzil Maya peoples of highland Chiapas also shows spatial similarities with Classic Maya clusters, although today it is a rural feature, lacking urban expression. These two cases were chosen because they are the archaeological and ethnographic cases of Mesoamerican clustered settlement with the most extensive data.

The Aztec calpolli

The Nahuatl term *calpolli* had a variety of meanings in 16th century central Mexico (Reyes García 1996), and it was the topic of a lengthy (and largely unproductive) scholarly debate on the nature of Aztec social organization (reviewed in Offner 1983, pp. 163-175). Here I focus on the dominant meaning of the term: a spatially localized group of households with a common economic basis. Two distinct levels of *calpolli* are documented in both the historical and archaeological records: a small unit of some ten to twenty households, and a larger unit of 100 to 200 households. The term *tlaxilacalli* is often used in Nahuatl-language documents for both types of unit, and in documents from Morelos the term *chinamitl* is often used for the smaller category. The most detailed information on Aztec *calpolli* is found in a series of early colonial Nahuatl-language census documents from Morelos; these are summarized in several secondary sources (Carrasco 1964; Smith 1993). Major works on the *calpolli* include Reyes García (1996), Hicks (1982), Offner (1983), and Lockhart (1992, pp. 16-20).

Five features of the Aztec *calpolli* are particularly relevant for understanding neighborhoods in low-density cities. First, *calpollis* existed in both urban and rural contexts. The imperial capital Tenochtitlan was organized in *calpolli* (Reyes García 1996), which served as neighborhoods. The smaller but more numerous city-state capitals also contained *calpolli* (Smith 2008, *passim*). In rural areas, a *calpolli* was a village. The communities represented in the Morelos census documents include city-state capitals and smaller, rural villages. There is no indication that the organization or social dynamics of *calpolli* in these settings differed significantly in rural and urban contexts. Second, the members of a *calpolli* often engaged in common economic activities. In rural contexts (and probably in city-state capitals as well) *calpolli* members farmed a contiguous area of fields (typically owned by a noble), and in Tenochtitlan craft specialists were organized by *calpolli*.

Third, the *calpolli* was a unit of taxation and administration. Officials known as *calpixque* resided in the *calpolli* and organized corvée labor and tax payments (Smith s. d.). Lockhart (1992) calls officials in the smaller *calpollis* « minor functionaries », whereas the large *calpolli* typically had a resident noble in charge.

Fourth, membership and social organization in the *calpolli* were structured more by social class and by space or territory than by kinship. In the Morelos documents, the members of a *calpolli* were integrated through residence and through common relations of subjection or servitude to a noble who owned the land farmed by *calpolli* members. At the site of Cuexcomate, an Aztec town in western Morelos, a large residential compound on the central plaza was the residence of a noble household, probably the individual who owned the farmland worked by the commoner residents of the site (Smith 1993). According to some documents, *calpolli* councils oversaw local affairs, including the distribution of land. Fifth, the large *calpolli* typically contained a temple that provided a focus for common ceremony (Calnek 1976, p. 297).

In an earlier paper (Smith 1993) I show that the small and large *calpolli*, as described in the Morelos census documents, correspond rather precisely in size and organization to two levels of settlement clustering at Cuexcomate (Figure 3). The four clusters (drawn informally by hand) correspond to the small *calpolli* or *chinamitl*, and the entire site corresponds to the large *calpolli*. Although the imperial capital Tenochtitlan is often taken as the archetypical Aztec urban settlement, in fact it was completely anomalous in size, density, layout, and organization (Smith 2008). The site of Cuexcomate is far closer to the structure and density of most Aztec cities (the city-state capitals), which can be considered medium-density urban centers. The median population density of Aztec city-state capitals is 50 persons per hectare (*ibid.*, p. 152), which is closer to the density of Classic Maya cities (generally between 5 and 10 persons per hectare, see Culbert et Rice 1990) than it is to the density of Tenochtitlan (over 150 persons/ha).

Like Classic Maya settlement patterning, Aztec settlement (outside of Tenochtitlan) was spatially clustered. As in the Maya lowlands, clusters (*calpolli*) sometimes served as isolated hamlets or villages, and sometimes they served as the spatial building-blocks of dispersed urban centers. In both contexts, the members of clusters engaged in activities and shared the kinds of conditions typical of the residents of urban neighborhoods in areas with high-density cities: they interacted frequently, they worked together on common economic tasks, and they were part of a named social unit with an identity within a larger urban and political structure.

The Waterhole Groups of the Tzotzil Maya

Many scholars have made comparisons between highland Tzotzil social organization and that of the Classic Maya (e.g., Barnhart 2008; Vogt 1961, 1983). In contrast to most prior comparisons, however, my use of the ethnographic data as an analogy for the Classic Maya is highly specific. I wish to avoid the drawn-out debate over whether the modern Tzotzil cargo system is a useful model for Classic

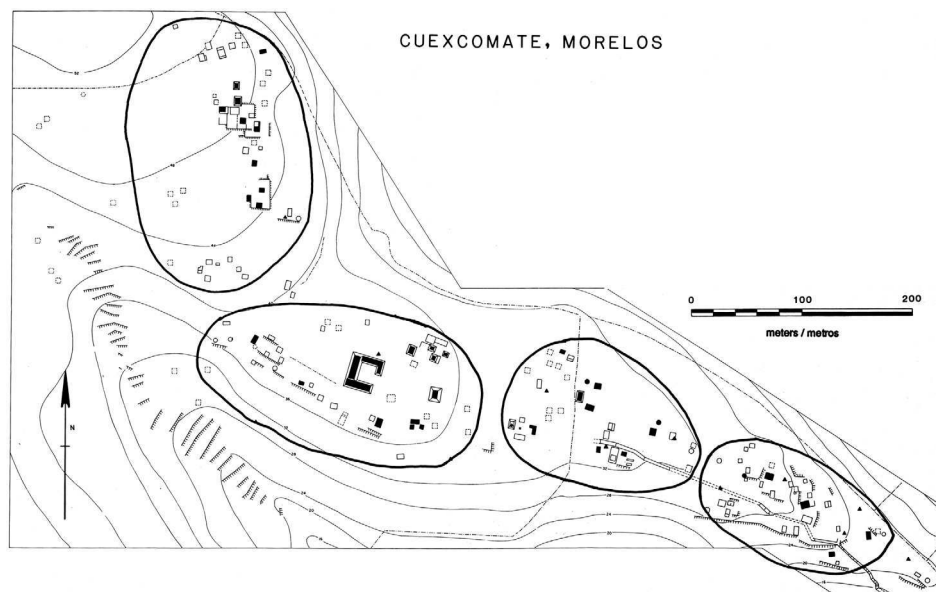


FIG. 3 – House clusters (*calpolli*) at the Aztec town of Cuexcomate in Morelos (map by the author, M. S.).

Maya society (Ashmore and Willey 1981). I argue, first, that the ethnographic settlement clusters are similar to Classic Maya clusters in their form and spatial configuration; and, second, that the modern features are characterized by the kinds of behavioral and institutional features described above for neighborhoods in low-density cities⁵.

In the Tzotzil villages around Zinacantan, houses are clustered at three levels (Collier 1975, pp. 79-85; Vogt 1969, pp. 127-149). The smallest cluster is the *sna*, a small group of households living in close proximity. In most *sna*, the households are related through kinship ties and joint participation in ceremonies. The next larger level of clustering is the waterhole group, a collection of *snas* and households that live in proximity to one another. They are organized around naturally occurring waterholes that have both pragmatic and symbolic significance. Figure 4 shows the waterhole groups and *snas* of the hamlet of Paste. The population of these six waterhole groups varies between 10 and 523 persons, with a mean of 180; the standard deviation is 180 (Vogt 1969, p. 176). The third and largest level of clustering is the hamlet. The hamlet of Paste has 1,086 inhabitants. Hamlets vary from 121 to 1,227 persons, with a mean of 650 and standard deviation of 360 (*ibid.*, p. 162).

Of these three levels, the waterhole group seems closest to Classic Maya house clusters in its size and scale. Members of the Tzotzil waterhole groups are

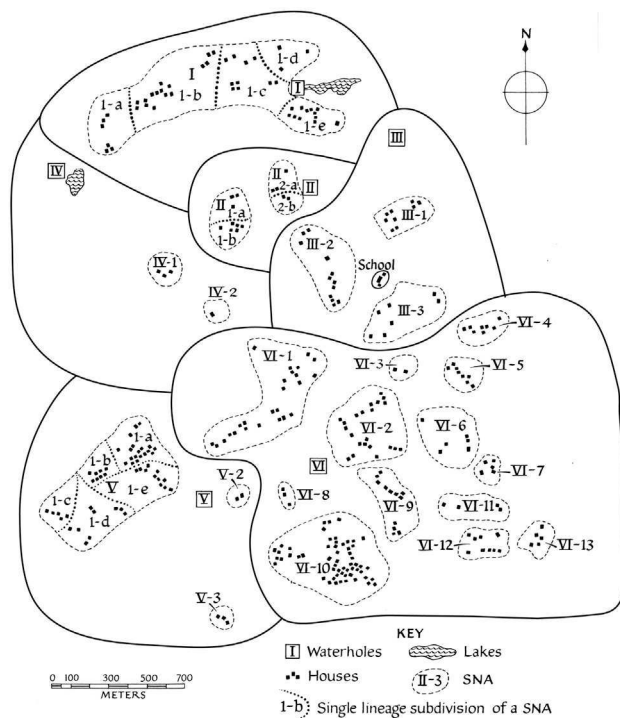


FIG. 4 – Tzotzil hamlet of Paste in 1964, showing waterhole groups and *snas* (modified after Vogt 1969, p. 173).

integrated through social interaction and through activities and institutions in the realms of economics, politics, and religion. Access to water is dependent upon membership in a waterhole group. Members participate in a number of collective labor projects, and an informal governing group of shamans have the authority to fine non-contributors. Waterhole groups maintain a number of cross shrines in and around the group's land, and periodic ceremonies contribute to social integration.

CASE STUDIES: AFRICA

Most pre-European cities in sub-Saharan Africa had low population densities relative to European and Mediterranean urban centers (Coquery-Vidrovitch 1993; Fletcher 1993, 1998; Hull 1976). Houses were typically arranged into clusters that functioned as wards or neighborhoods (Hull *ibid.*, pp. 74-76). The Mossi capital of Ouagadougou, mapped by Binger in the late nineteenth century,

is a typical example (Figure 5). Skinner (1974, p. 19) notes that « early travelers reported that precolonial Ouagadougou was a whole complex of villages scattered over 12 kilometers ». This was a typical reaction of Europeans when they saw African low-density cities. When safari hunter Percy Powell-Cotton visited Addis Ababa in 1900, it was a city of 100,000 and capital of a powerful empire (see discussion below). Yet he was not impressed with the size or grandeur of the city: « Dotted across the plain were clusters of huts, many stockaded enclosures – large and small – and several camps, but all very much scattered and more resembling a collection of villages and farmsteads than the capital of a great empire » (Pankhurst 1985, p. 213). One might imagine a similar reaction if residents of Teotihuacan visited Maya cities like Tikal and Copan.

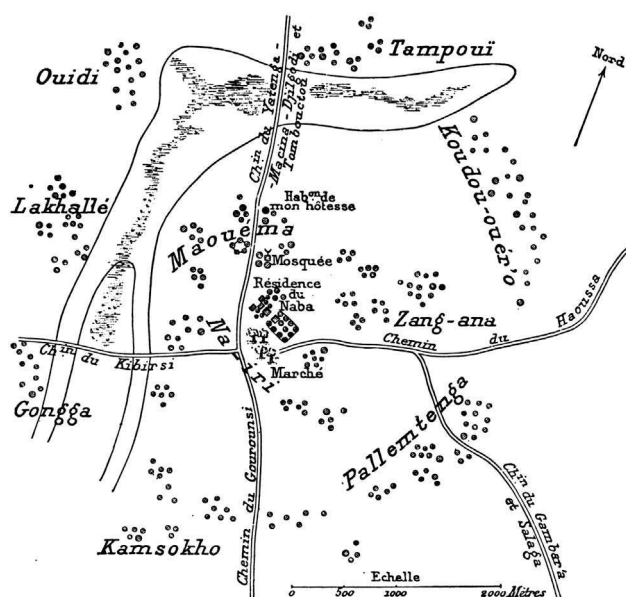


FIG. 5 – Clusters of houses at Ouagadougou, the Mossi capital in the 18th century (Binger 1892, vol. 2, p. 397).

This view of African cities as mere collections of villages exemplifies a long-standing western bias in urban interpretation. More than two millennia ago the Athenian Thucydides disparaged the Spartan capital as follows: « Since, however, the city is not regularly planned and contains no temples or monuments of great magnificence, but is simply a collection of villages, in the ancient Hellenic way, its appearance would not come up to expectation » (Thucydides 1972, p. 41, book 1, section 10). The same metaphor was expressed by Sanders (1979, p. 397) who, in his effort to portray Maya cities as non-urban settlements in comparison with Teotihuacan, called Tikal « a gigantic cluster of hamlets with intervening

areas of light settlement ». Yet these clusters of houses in low-density African cities exhibited the major features of urban neighborhoods as documented in higher-density cities. In the published literature on pre-colonial African cities (e.g., Connah 2001; Coquery-Vidrovitch 1993; Hull 1976; Shaw *et al.* 1993) I have located two examples whose house clusters are described in sufficient detail to examine neighborhood characteristics: Bida and other settlements of the Nupe in West Africa, and Addis Ababa in Ethiopia ⁶.

The Nupe efu

Nadel's (1942) ethnographic study of the Nupe kingdom in West Africa contains scattered descriptions of a unit – the *efu* or ward – that resembles the Aztec *calpolli* in structure and function. Like the Aztec *calpolli*, the Nupe *efu* was a basic level of settlement in both rural and urban settings. In the words of Nadel (*ibid.*, p. 34),

The local arrangement of the Nupe village, large or small, is nearly always the same: clusters of compounds scattered comfortably over an area, each « cluster » consisting of a number of walled compounds, « houses » in native terminology, and forming what the Nupe call an *efu*, or ward. These village wards are separated by stretches of open land, spacious cultivated fields, studded with clumps of trees.

Figure 6 is Nadel's sketch map of settlement clusters in the town of Doko (unfortunately this is the most detailed plan available). The 800 inhabitants of Doko were divided into five *efu*. One of the *efu* had three clusters, and the others a single cluster each. The capital city, Bida, contained between 25,000 and 30,000 people during Nadel's fieldwork in the 1920s. Although the lack of scales on Nadel's maps limits precise calculations, his estimate of the circumference of the city wall (12 miles) produces a density of approximately 10 persons per hectare within Bida. One reason for the low population density was the presence of infield gardens within the city. Nadel (*ibid.*, p. 206) notes that, « Cultivation is also to some extent carried on inside the villages and even inside Bida town ».

Nadel provides little information about the built environment or spatial organization of Bida. He does not give the number of *efu* within the city, and information about these wards is scattered throughout his book. Several features of the *efu* of Bida do stand out, however. First, most of the craft specialists (blacksmiths, other metalsmiths, weavers, bead makers, glass producers) were concentrated within specific *efu*. Second, foreigners were also concentrated within *efu*. Such occupational and ethnic clustering or concentration is common (but by no means universal) in urban neighborhoods throughout the world (York *et al.* 2011). Third, the *efu* had leaders that Nadel calls « ward-heads » (Nadel 1942, pp. 120,162), but we are told little about these officials. Bida was also divided into larger administrative districts called *ekpa* (*ibid.*, *passim*).

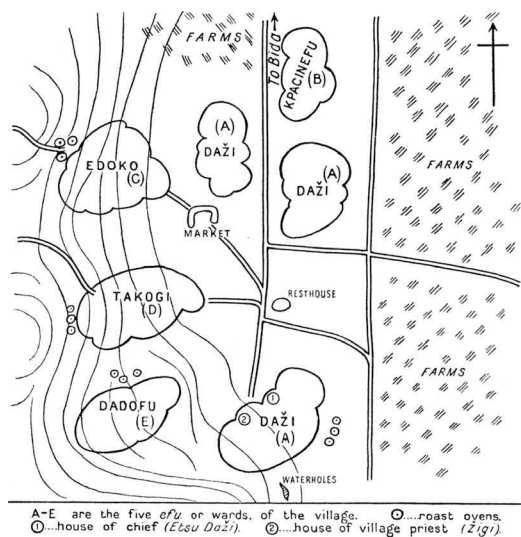


FIG. 6 – House clusters (*efu*) at the Nupe town of Doko in Nigeria (modified after Nadel 1942, p. 35).

Neighborhood clusters in Addis Ababa

Although Addis Ababa had 100,000 inhabitants and was the capital of a powerful empire that defeated European armies, its built environment around 1900 did not much impress British visitors (see the quotation from Percy Powell-Cotton above). Indeed, it would be difficult to identify Addis Ababa as a city rather than a village from early photographs. Figure 7, for example shows an area of the city close to the royal palace (visible at the top of the hill) in 1897. Although there are large crowds of people, housing is widely scattered and there are significant empty areas.

Unlike Bida and most other low-density African cities, Addis Ababa was well mapped at its height in 1897 (Gleichen 1971, endpiece). Figure 8 (redrawn from the original published plan) shows the clustering of residences in a pattern that resembles many Classic Maya settlement maps. Commoners were clients of nobles, and their houses were clustered around the compounds of their patrons (Figure 8). Gleichen (*ibid.*, p. 157) described this clustering, and noted that « the importance of the individual [was] measured by the size of the enclosure and the number of smaller huts grouped around it ». *Sefer* is the Amharic term for these clusters, which are referred to by urban historians as neighborhood in English and *quartier* in French (Giorghis et Gérard 2007, pp. 42-43). Individual *sefer* were separated by open space and by roads and streams (*ibid.*, pp. 122-123). Figure 9 shows a road that separated two neighborhoods in early Addis Ababa. The



FIG. 7 – Photograph of Addis Ababa in 1897, showing the scattered distribution of houses. The houses in the foreground are a settlement cluster, and the structures behind the wall at the top of the hill are the royal palace compound (Giorghis and Gérard 2007, p. 55; reproduced with permission).

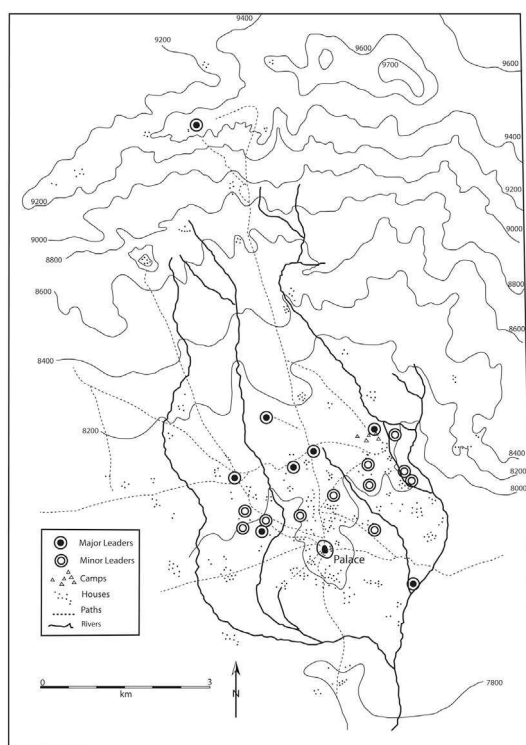


FIG. 8 – The city of Addis Ababa, Ethiopia, in the 1890s, showing the clustering of houses and the locations of elite residential compounds [map by Miriam Cox; redrawn from Gleichen (1971, endmap) and Johnson (1974, p. 88)].



FIG. 9 – A street and a river that separated neighborhoods in Addis Ababa around 1900 (Giorghis and Gérard 2007, p. 123; reproduced with permission).

clustering of commoner houses around noble compounds recalls Maya settlement at several levels, including Ashmore's group-focused patio clusters (Figure 2) and Bullard's minor ceremonial center.

Like other tropical low-density cities (Fletcher 2009; 2011), including Bida (see above) and ancient Maya cities (Isendahl 2002), there was significant intensive infield cultivation in Addis Ababa (Gascon 1995, p. 15). This was one of the reasons for its appearance to European visitors as a « collection of villages ». Indeed, Giorghis and Gérard (2007, p. 122) include a subheading in their book on Addis Ababa called « The Rural Character of the City ». There is frustratingly little information about the settlement clusters or *sefer* at Addis Ababa, although scattered data suggest the presence of the kinds of ethnic and occupational clustering characteristic of urban neighborhoods in other areas (Garretson 2000, pp. 67, 87; Pankhurst 1985, p. 212).

CONCLUSIONS

The argument of this paper can be summarized in three points. First, spatial clusters of houses in three historically-documented traditions of low- and medium-density urbanism (Aztec, Addis Ababa, and Bida) exhibited activities and conditions typical of urban neighborhoods in both premodern and modern cities. These include frequent and regular social interaction among residents; shared social characteristics such as ethnic origin or occupation; an administrative role within the city; a ceremonial focus for social integration; and an indigenous term that European visitors translated as neighborhood or a synonym (*e.g.*,

ward, quartier, barrio). In two of the three cases (Aztec and Nupe), the neighborhood clusters were features of settlement in both rural and urban settings. My second point is that modern Tzotzil Maya rural settlement clusters – waterhole groups – exhibit these same spatial and social characteristics. Third, because Classic Maya settlement clusters resemble the historical and ethnographic cases in their spatial form and scale, these comparative data strengthen the interpretations of some Mayanists that they served as urban neighborhoods.

The recognition that settlement clusters at Classic Maya cities served as urban neighborhoods has several implications. First, this helps archaeologists in their analyses of social patterns within Maya cities and improves our understanding of Maya urban life. The French research outlined above can serve as a model for neighborhood analysis at other sites. Second, the existence of neighborhoods adds strength to the interpretation of Maya settlements as cities, and this aids the comparative analysis of cities around the world. The sample of premodern cities that can be compared is greatly enlarged by the inclusion of the Classic Maya as a fully urban social tradition. Third, the study of Maya neighborhoods contributes to a growing understanding of life in low-density tropical cities (Connah 1987; Fletcher 2009, 2011; Miksic 2000). Maya cities provide examples of a distinctive and successful form of urbanism that flourished for many centuries in a tropical lowland setting. Why were Maya cities successful for such a long period of time? Perhaps a better understanding of neighborhoods and social life will permit this question to be answered in the future. *

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NOTES

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1. I use the term « low-density city » loosely to describe settlements with the following traits: 1) central institutions that affect a hinterland beyond the settlement. These central institutions, in the realms of administration, religion, and economy, are often called « urban functions » (Fox 1977; Marcus 1983; Smith 2008, pp. 4-7); 2) population density under 10 persons/hectare. This is the upper density limit of « low-density agrarian cities » as discussed by Fletcher (1995, p. 93; 2009).

2. Although Willey's research on settlement patterns provided a foundation for the analysis of Maya urbanism, for many decades Willey himself resisted classifying Maya centers as cities, maintaining instead that the Maya should be called a « civilization without cities » (Willey 1962, p. 96). The 1950s and 1960s was a time of much activity in the comparative study of ancient urbanism, and Willey was an important participant, often an organizer, in the major events of the time (Braidwood and Willey 1962; Willey 1956a, 1960). His denial of Maya urbanism thus presents a historical puzzle that scholars have yet to address.

3. In this paper I use the terms « house cluster » and « settlement cluster » interchangeably to refer to spatial groupings of nearby houses that are located at some distance from other houses. This is distinct from the term « urban cluster » proposed by McIntosh (1999), a broader concept that would seem to include a variety of Bullard's categories, including clusters, zones, minor ceremonial centers and major ceremonial centers.

4. Arnauld *et al.* (2004) use the Spanish term *barrio* for neighborhood. Smith and Novic (s. d.) argue that *barrio* is not an appropriate term for neighborhoods in ancient Mesoamerica because its meanings in Colonial-period and modern Mesoamerica can be quite different.

5. The similarity of Tzotzil and Classic Maya settlement clusters was pointed out some time ago by Vogt (1961, p. 142; 1983, pp. 90-95), who attributed this to the notion of an unchanging, timeless Maya culture: « the Maya are basically a hamlet-dwelling people » (Vogt 1983, p. 90). In contrast, I would attribute the similarities to the spatial, social, and demographic constraints on social life in Mesoamerican tropical settings.

6. Mapping and excavation at the Iron Age site of Begho, Ghana, also show residential clustering (Anquandah 1993; Connah 2001, pp. 152-153), suggesting some time depth to this pattern in West Africa.

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